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# **Innocent Bystanders? Monetary Policy and Inequality in the U.S.**

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# INNOCENT BYSTANDERS?

## MONETARY POLICY AND INEQUALITY IN THE U.S.



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## GOAL OF THE PAPER

Assess whether and how monetary policy affects cyclical variations in consumption and income inequality in the U.S.

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Assess whether and how monetary policy affects cyclical variations in consumption and income inequality in the U.S.

- Useful for identifying the transmission channel of monetary policy
- Useful for understanding the welfare implications of monetary policy
- Provide new conditional 2<sup>nd</sup> moments for heterogeneous agent models to match

# CHANNELS FROM MONETARY POLICY TO CONSUMPTION/INCOME INEQUALITY

- Heterogeneous wage/employment effects across population
  - different complementarities with capital for skilled/unskilled
  - different industry sensitivity to interest rate changes (e.g. durables vs. nondurables, cost channels and liquidity constraints)
  - insiders vs. outsiders in the firms (e.g. seniority)

# CHANNELS FROM MONETARY POLICY TO CONSUMPTION/INCOME INEQUALITY

- Heterogeneous wage/employment effects across population
- Income/consumption composition effects
  - importance of labor earnings vs. financial income vs. business income vs. transfers
  - importance of durable goods purchases and other interest-sensitive expenditures

## CHANNELS FROM MONETARY POLICY TO CONSUMPTION/INCOME INEQUALITY

- Heterogeneous wage/employment effects across population
- Income/consumption composition effects
- Wealth effects on consumption and labor supply decisions
  - real interest rate increase is a transfer from borrowers to savers
  - different portfolio allocations will also affect wealth outcomes

## CHANNELS FROM MONETARY POLICY TO CONSUMPTION/INCOME INEQUALITY

- Heterogeneous wage/employment effects across population
- Income/consumption composition effects
- Wealth effects on consumption and labor supply decisions

Different channels point to different impacts of monetary policy on inequality. Which effects dominate in the data?



## WHAT WE DO

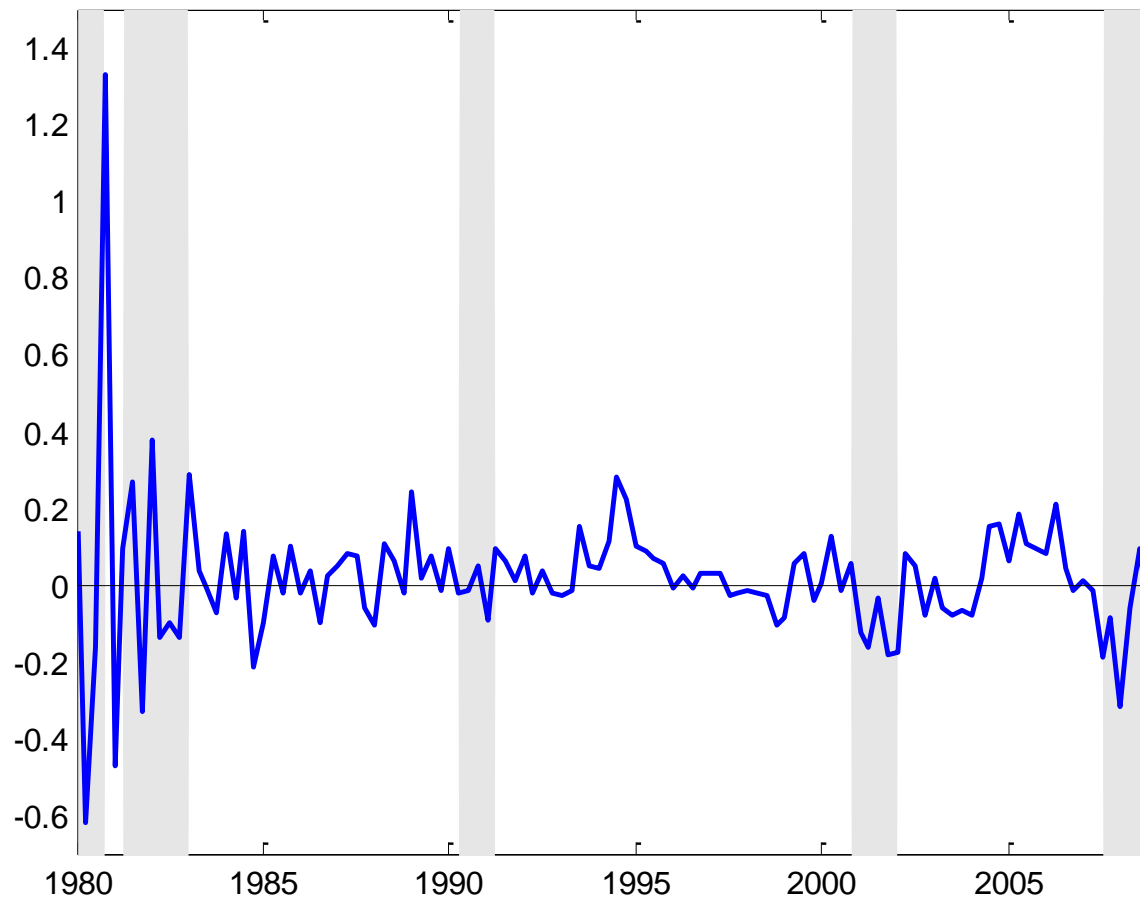
- Construct detailed household data for income, labor earnings, consumption and total expenditures using Consumer Expenditures Survey.
- Assess the overall effects of monetary policy shocks on each form of inequality.
- Consider the channels via which monetary policy affects inequality.
- Consider the historical contribution of monetary policy shocks to inequality.
- Consider the effects of different types of monetary policy shocks.

## WHAT WE FIND

1. Contractionary monetary policy shocks increase inequality.
2. Surprisingly robust finding.
3. Additional evidence points to
  - wealth transfers (borrowers vs. savers)
  - income composition effects
  - heterogeneous effects on labor income
4. Monetary policy accounts for a non-trivial amount of variation in cyclical inequality.

# MONETARY POLICY SHOCKS

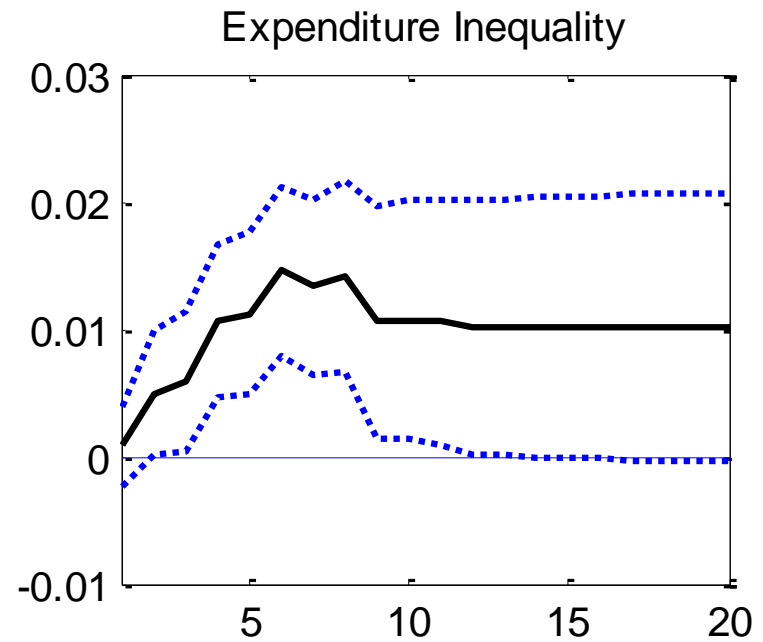
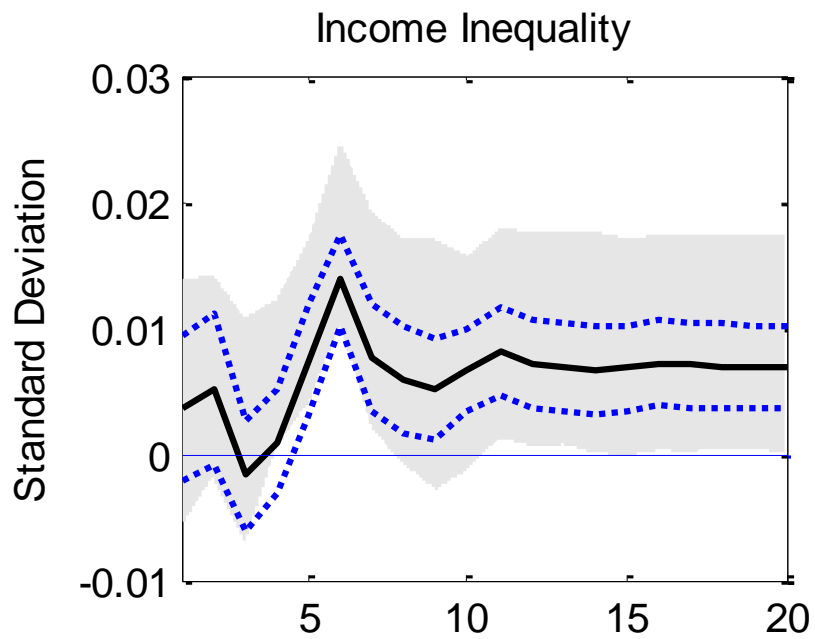
Identified as in Romer and Romer (2004) until 2008Q4.



# THE CONSUMER EXPENDITURE SURVEY

- Most comprehensive micro-level data source on consumption in the U.S.
- Monthly rotating panel of 1,500-2,500 households per month since 1980Q1.
- Interview Survey covers 95% of typical household's expenditures.
- Provides detailed information on sources of income.

# INEQUALITY AFTER CONTRACTIONARY MP SHOCKS



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Results are robust to:

- Econometric details
  - Lag lengths
  - Different ways of estimating IRF's (MA, VAR)
  - Controlling for other shocks

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  - Dropping Volcker disinflation

# INEQUALITY AFTER CONTRACTIONARY MP SHOCKS

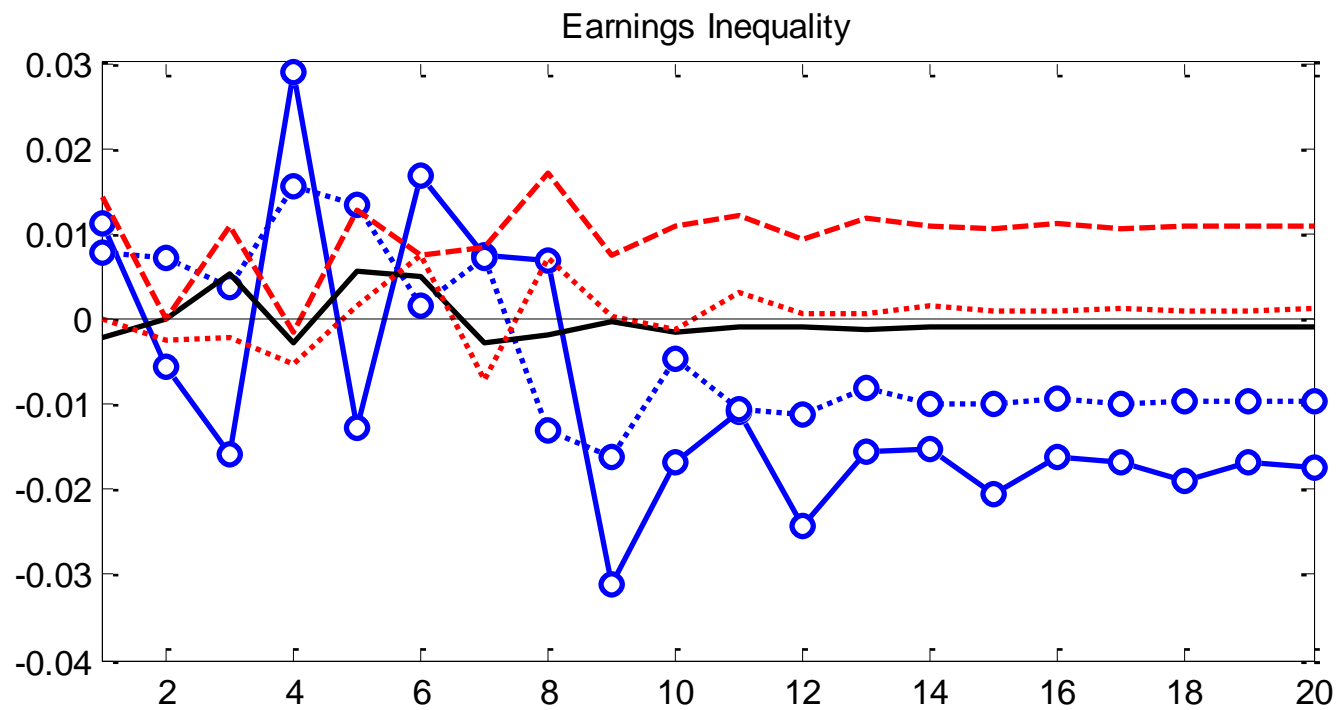
Results are robust to:

- Econometric details
  - Lag lengths
  - Different ways of estimating IRF's (MA, VAR)
  - Controlling for other shocks
- Time period
  - Dropping recessions
  - Dropping Volcker disinflation
- Treatment of household characteristics
  - Controlling for household size
  - Controlling for other household characteristics (age, ed,...)
  - Controlling for hours worked



# WHAT DRIVES THE RESPONSE OF INEQUALITY?

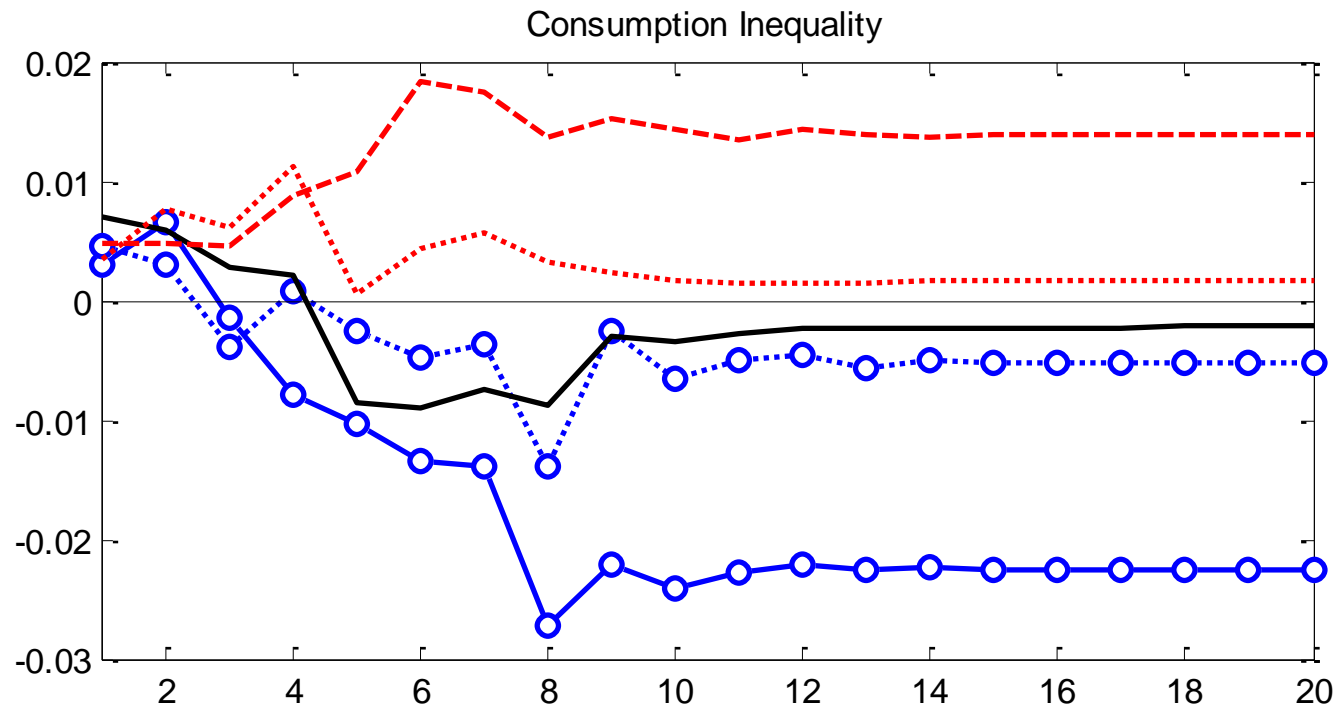
## Channel 1: Heterogeneity in labor earnings



Earnings rise at the top of the distribution  
and fall at the bottom of the distribution.

# WHAT DRIVES THE RESPONSE OF INEQUALITY?

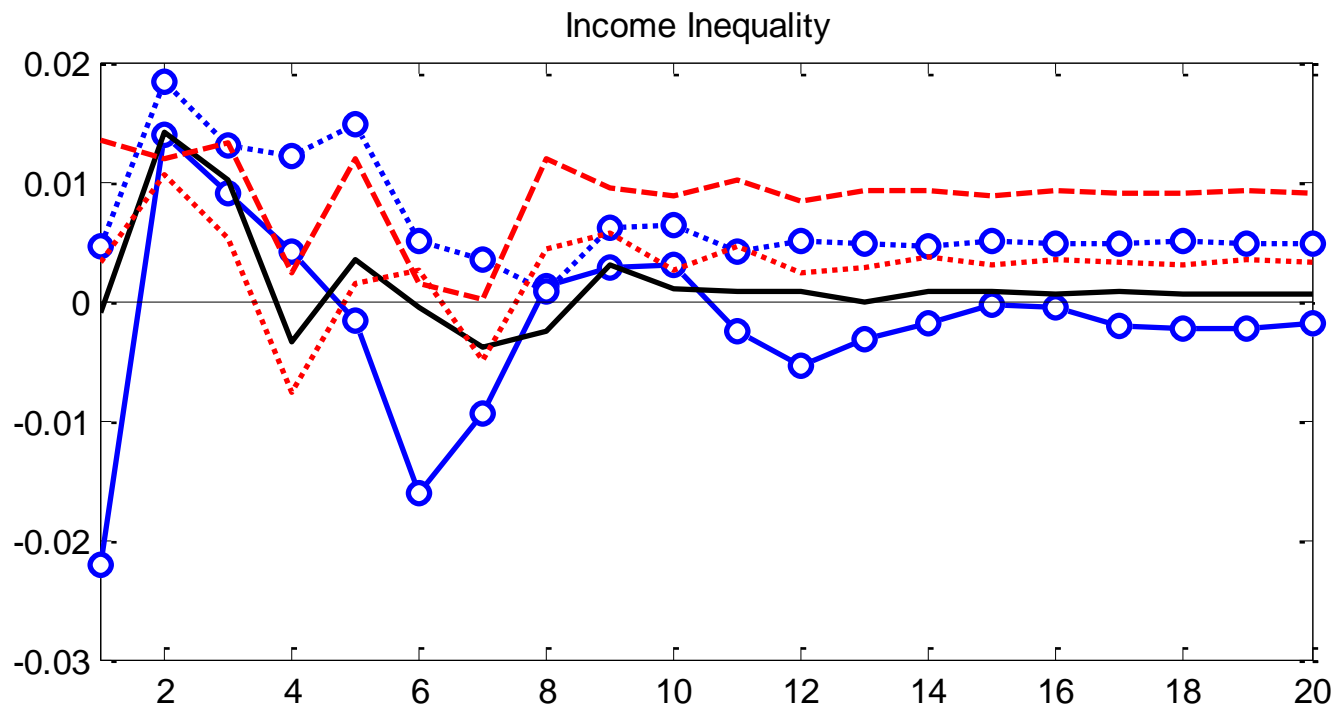
## Channel 1: Heterogeneity in labor earnings



This maps almost 1-1 into consumption heterogeneity.

# WHAT DRIVES THE RESPONSE OF INEQUALITY?

## Channel 2: Heterogeneity in composition of income



Transfers strongly reduce income losses at the bottom of the income distribution.

# WHAT DRIVES THE RESPONSE OF INEQUALITY?

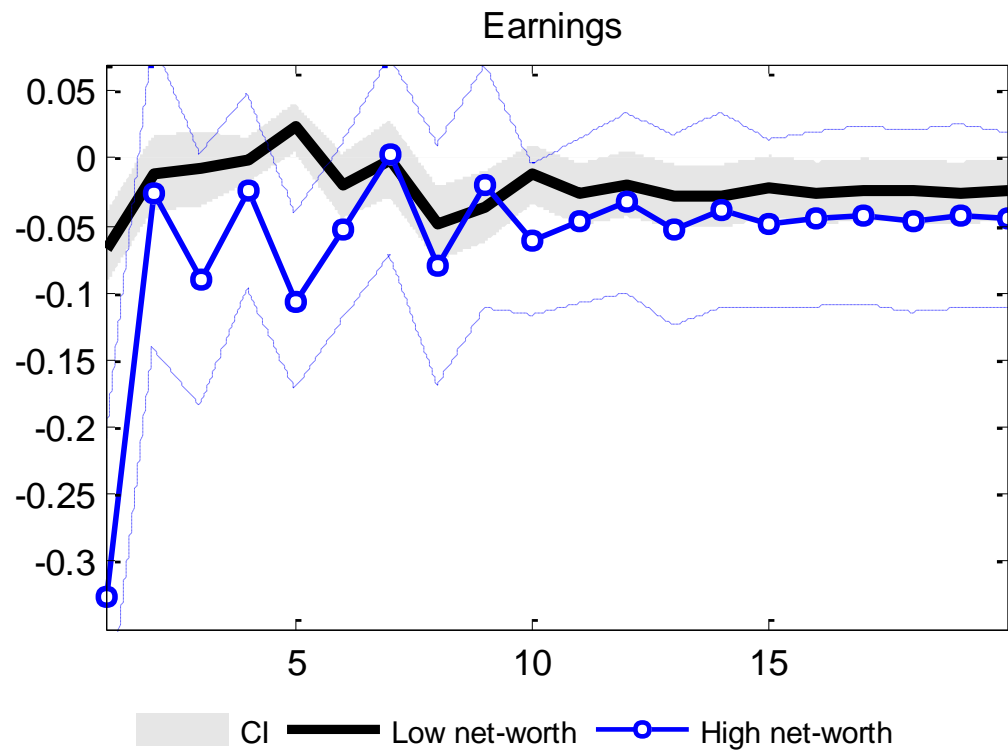
## Channel 2: Heterogeneity in composition of income

Quintiles by consumption of nondurables and services	Share of income source			
	Labor Earnings	Business	Financial	Other
	(1)	(2)	(3)	(4)
1	<b>0.380</b>	0.020	0.106	<b>0.494</b>
2	<b>0.597</b>	0.040	0.097	<b>0.267</b>
3	<b>0.704</b>	0.050	0.086	0.160
4	<b>0.770</b>	0.056	0.071	0.103
5	<b>0.773</b>	0.082	0.076	0.069

Those at the bottom of the distribution receive a larger share of income from (countercyclical) transfers.

# WHAT DRIVES THE RESPONSE OF INEQUALITY?

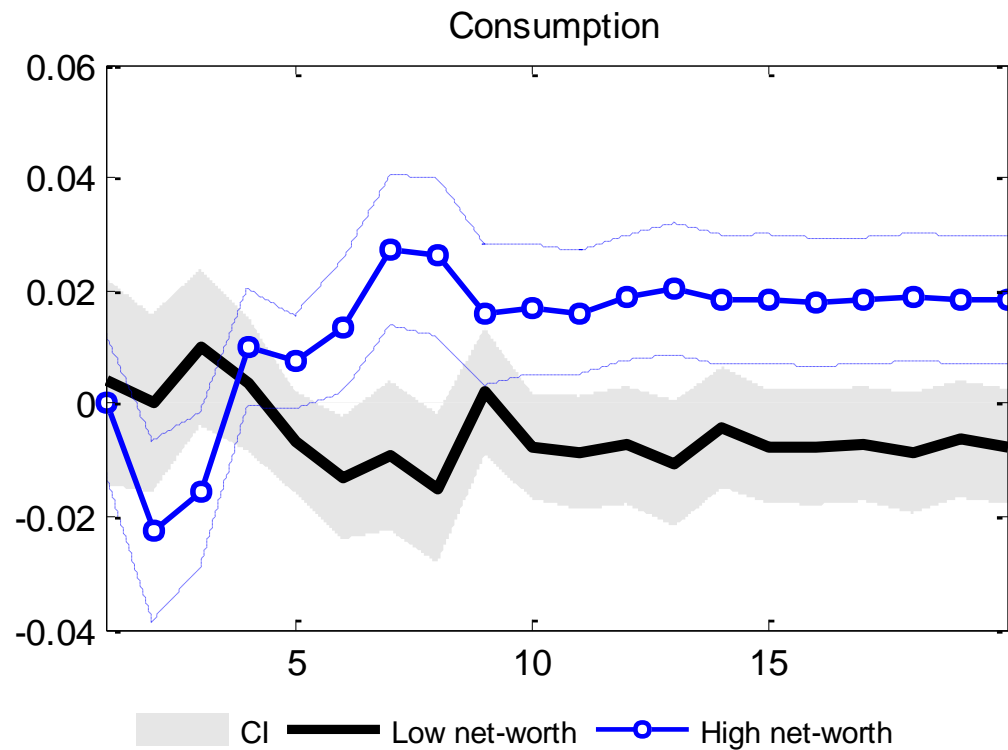
## Channel 3: Redistribution from Borrowers to Savers



There is no difference in response of labor earnings or income between low net-worth and high net-worth households

# WHAT DRIVES THE RESPONSE OF INEQUALITY?

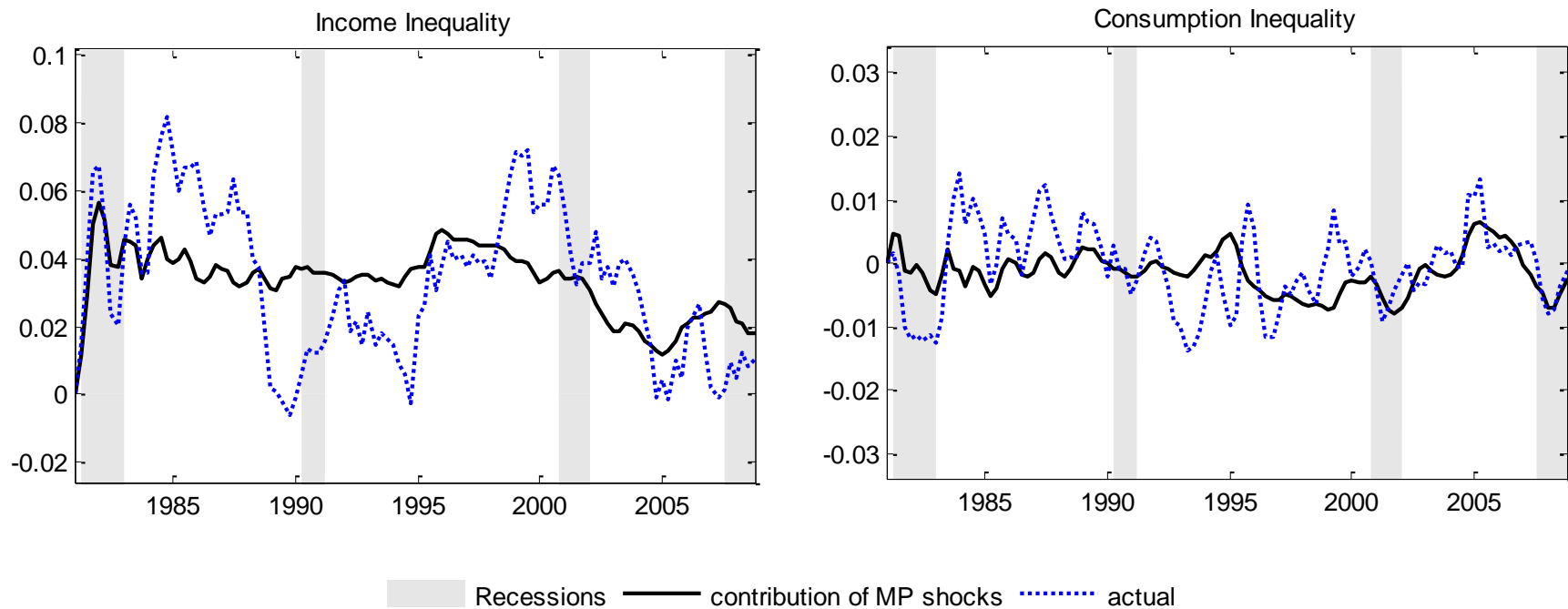
## Channel 3: Redistribution from Borrowers to Savers



but high net-worth households raise their consumption levels relative to low net-worth households.

# HOW LARGE HAVE THESE EFFECTS BEEN?

Not very large when looking at Romer and Romer shocks...

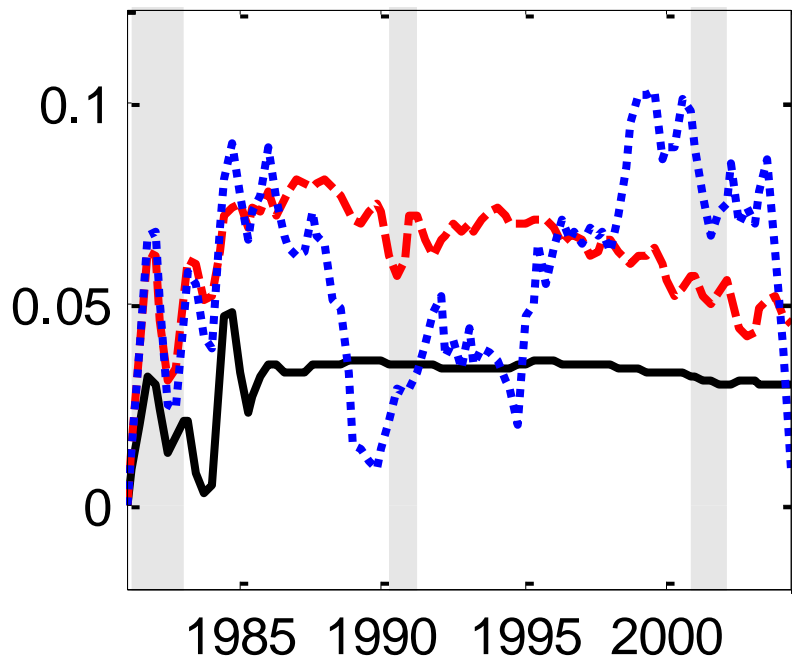


about the same order of magnitude as for other macro variables.

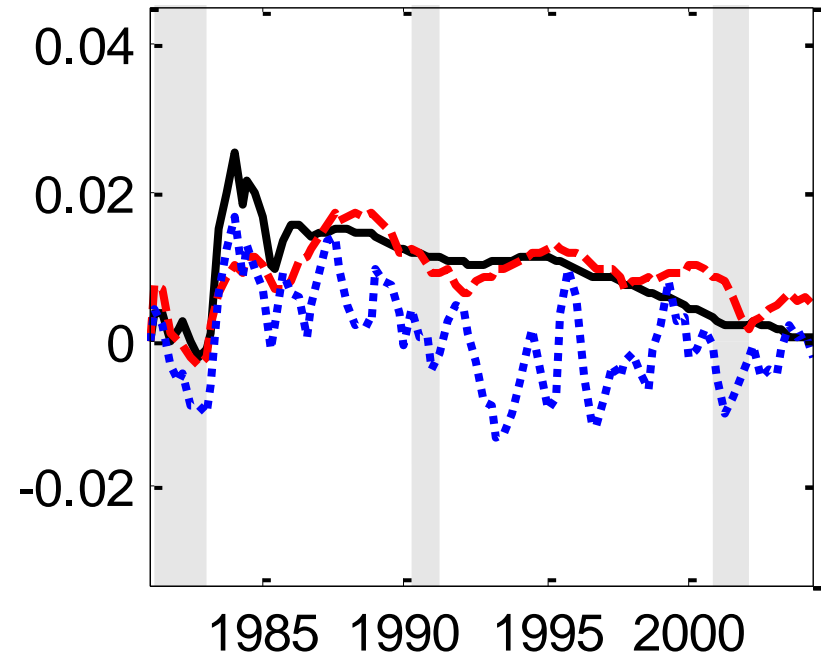
# HOW LARGE HAVE THESE EFFECTS BEEN?

but potentially larger if we focus on shocks to “target” level of inflation.

Income Inequality



Consumption Inequality



Red line is using Ireland (2006), black line is Coibion and Gorodnichenko (2011), blue is actual.



# TAKE-AWAY AND QUESTIONS

- Monetary policy shocks have discernible effects on inequality via
  - heterogeneous earnings responses
  - heterogeneous sources of income
  - redistributive effects

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- Monetary policy shocks have discernible effects on inequality via
  - heterogeneous earnings responses
  - heterogeneous sources of income
  - redistributive effects

but...

- What accounts for heterogeneity in earnings responses?
- Would results be even larger with the top 1%?
- Should policymakers take distributional effects into consideration?
- Is the ZLB even costlier for welfare than we thought?

We need models with heterogeneous agents  
to answer many of these questions.